

SEP 3 0 2002



SUBSTITUTE VERSION SHOWING CHANGES MADE
TO THE CLAIMS IN AMENDMENT FILED 21 AUGUST 2002

Additions shown underlined; Deletions shown in brackets.

Please cancel Claims 2 and 9, without prejudice.

Please amend Claims 1, 3, 6, 29 and 31 as follows:

1. (Thrice Amended) A liquid crystal display device, comprising:
 - a liquid crystal display element including:
 - a pair of substrates; and
 - a liquid crystal layer sandwiched by the substrates and constituted by a liquid crystal material of which the refractive index anisotropy is specified to vary with wavelengths of rays of light within a range that allows no viewing-angle dependent coloration to occur to an image displayed on the liquid crystal display element;
 - a pair of polarizers disposed so as to sandwich the liquid crystal display element; and
 - at least one phase difference plate disposed between the liquid crystal display element and the pair of polarizers,
 - wherein the phase difference plate has three principal refractive indices n_a , n_b , and n_c being mutually related by the inequality $n_a < n_b < n_c$, wherein the principal refractive index n_b inclines to the normal to a surface of the phase difference plate, and wherein the refractive index anisotropy Δn (550) of the liquid crystal material for rays of light having the wavelength of 550 nm is specified to be more than 0.060 and less than 0.120.

3. (Amended) The liquid crystal display device as defined in claim [2] 1,
wherein the refractive index anisotropy Δn (550) is specified
to be not less than 0.065 and not more than 0.115.

6. (Amended) [The liquid crystal display device as defined in claim 1,] A liquid
crystal display device, comprising:

a liquid crystal display element including:

a pair of substrates; and

a liquid crystal layer sandwiched by the substrates and
constituted by a liquid crystal material of which the refractive
index anisotropy is specified to vary with wavelengths of rays of
light within a range that allows no viewing-angle dependent
coloration to occur to an image displayed on the liquid crystal
display element;

a pair of polarizers disposed so as to sandwich the liquid
crystal display element; and

at least one phase difference plate disposed between the
liquid crystal display element and the pair of polarizers,

wherein the phase difference plate has three principal
refractive indices n_a , n_b , and n_c being mutually related by the
inequality $n_a < n_b < n_c$, wherein the principal refractive index n_b
inclines to the normal to a surface of the phase difference plate,
wherein the refractive index anisotropy Δn (550) of the liquid
crystal material for rays of light having the wavelength of 550 nm
is specified to be more than 0.060 and less than 0.120, and

wherein Δn (450) - Δn (650), i.e., the difference between the refractive index anisotropy Δn (450) of the liquid crystal material for rays of light having a wavelength of 450 nm and the refractive index anisotropy Δn (650) thereof for rays of light having the wavelength of 650 nm, is specified to be not less than 0.0070 and not more than 0.0250.

10. (Amended) The liquid crystal display device as defined in claim [9] 6,
wherein the refractive index anisotropy Δn (550) is specified to be not less than 0.065 and not more than 0.115.
13. (Amended) The liquid crystal display device as defined in claim [12] 6,
wherein the optical phase difference plate includes:
a support base composed of a transparent organic high polymer;
and
a liquid crystal polymer layer formed on the support base to be aligned to possess oblique orientation and crosslinked.
14. (Amended) the liquid crystal display device as defined in claim [12] 6,
wherein the optical phase difference plate includes:
a support base composed of a transparent organic high polymer;
and
a liquid crystal polymer layer formed on the support base to be aligned to posses hybrid orientation and crosslinked.

29. (Amended) A liquid crystal display device, comprising:

a liquid crystal display element including a liquid crystal layer sandwiched by a pair of light-transmitting substrates each having an electrode layer provided thereon;

a pair of polarizers disposed so as to sandwich the liquid crystal display element; and

at least one phase difference plate disposed between the liquid crystal display element and the pair of polarizers,

wherein the improvement comprises that the at least one phase difference plate has three principal refractive indices n_a , n_b , and n_c being mutually related by the inequality $n_a < n_b < n_c$, and the principal refractive index n_b inclines to the normal of a surface of [the] said at least one phase difference plate, and that the liquid crystal layer is constituted by a liquid crystal material wherein the refractive index anisotropy Δn (550) of the liquid crystal material for rays of light having the wavelength of 550 nm is specified to be more than 0.060 and less than 0.120, and wherein Δn (450) - Δn (650), i.e., the difference between the refractive index anisotropy Δn (450) of the liquid crystal material for rays of light having a wavelength of 450 nm and the refractive index anisotropy Δn (650) thereof for rays of light having the wavelength of 650 nm, is specified to be not less than 0.0070 and not more than 0.0250 such that [of which] the refractive index anisotropy thereof is specified to vary with wavelengths of rays of light within a range that allows no viewing-angle dependent coloration to occur on a displayed image

31. (Amended) A liquid crystal display device, comprising:

a liquid crystal display element including:

 a pair of substrates; and

 a liquid crystal layer sandwiched between the substrates

constituted by a liquid crystal material of which the refractive index anisotropy is specified to vary with wavelengths of rays of light within a range that allows no viewing-angle dependent coloration to occur to an image displayed on the liquid crystal display element;

 a pair of polarizers disposed so as to sandwich the liquid crystal display element; and

 at least one phase difference plate disposed between the liquid crystal display element and the pair of polarizers,

 wherein the at least one phase difference plate has three principal refractive indices n_a , n_b , and n_c being mutually related by the inequality $n_a < n_b < n_c$, and the principal refractive index n_b inclines to the normal of a surface of [the] said at least one phase difference plate, and

 wherein Δn (450) - Δn (650), i.e., the difference between the refractive index anisotropy Δn (450) of the liquid crystal material for rays of light having a wavelength of 450 nm and the refractive index anisotropy Δn (650) thereof for rays of light having the wavelength of 650 nm, is specified to be not less than 0.0070 and not more than 0.0250.

Please add New Claim 48 as follows:

48. (New Claim) The liquid crystal display as defined in claim 31,
wherein the inclination angle of the principal refractive
index n_b of the phase difference plate is specified to be in the
range from 15° to 75°.